C++ ASSIGNMENT

1.Ques :Input a string and concatenate with its reverse string and print it.

Input : str = "PWSkills"
Output : "PWSkillssllikSWP"
Input : str = "pw"
Output : "pwwp"

Ans:

```
#include<iostream>
#include<string>
#include<algorithm>
using namespace std;
int main(){
        string s;
        getline(cin,s);
        string su=s;
        reverse(s.begin(),s.end());
        su=su+s;
        cout<<su;
        return 0;
}
```

2.Ques :Find the second largest digit in the string consisting of digits from '0' to '9'.

Input : str = "2947578"
Output : 8
Input : str = "1241"
Output : 2

Ans:

```
#include<iostream>
```

```
#include<string>
#include<algorithm>
#include<vector>
using namespace std;
int main(){
	int n;
	cout<<"enter the size of a string: ";
	cin>>n;
	vector<string> s;
	for(int i=0;i<n;i++){
		string a;
		cin>>a;
		s.push_back(a);
	}
	string max="!";
	string smax="!";
	for(int i=0;i<n;i++){
		if(s[i]>max){
			smax=max;
			max=s[i];
		}
	}
	for(int i=0;i<n;i++){
		if(s[i]>smax && s[i]!=max){
			smax=s[i];
		}
	}
	cout<<smax;
	return 0;
}
```

3.Ques :Input a string and return the number of substrings that contain only vowels.

Input : str = "abjkoe"

Output : 4

Explanation : The possible substrings that only contain vowels are "a" , "o" , "e" , "oe"

Input : str = "hgdhpw"

Output : 0

Ans:

```
#include<iostream>
#include<string>
#include<algorithm>
#include<vector>
using namespace std;
int main(){
        string s;
        cin>>s;
        int count=0;
        int nsub=0;
        for(int i=0;i<s.size();i++){
                if(s[i]=='a'||s[i]=='e'||s[i]=='i'||s[i]=='o'||s[i]=='u')
count++;
                else{
                nsub+=count*(count+1)/2;
                count=0;
        }
}
         nsub+=count*(count+1)/2;
         cout<<nsub;
        return 0;
}
```

4.Ques: Given an array of strings. Check whether they are anagram or not.

Input : s = "car" , t = "arc"

Output : True

Input : s = "book" , t = "hook"

Output : False

Ans:

```
#include<iostream>
#include<string>
#include<algorithm>
#include<vector>
using namespace std;
int main(){
	string s,t;
	cin>>s>>t;
	if(s.size()!=t.size()){
		cout<<"not anagram";
}
	else{
		vector<int>cu(26,0);
	for(int i=0;i<26;i++){
		cu[s[i]-'a']++;
		cu[t[i]-'a']--;
	}
	int cou=0;
	for(int i=0;i<26;i++){
		if(cu[i]==0){
			cou++;
		}
	}
	if(cou==26) cout<<"ana";
```

```
        else cout<<"not ana";
}
        return 0;
}
```

5.Ques: Given a sentence ‘str’, return the word that is lexicographically maximum.

Input : str = "proud to be pwians"

Output : pwians

Input : str = "decode dsa with pw"

Output : with

Ans:

```
#include<iostream>
#include<string>
#include<algorithm>
#include<vector>
#include<climits>
using namespace std;
int main(){
        string s;
        getline(cin,s);
        string word=" ";
        string maxword=" ";
        for(int i=0;i<s.size();i++){
                if(s[i]==' '){
                        maxword=max(maxword,word);
                        word=" ";
                }
                else{
                word+=s[i];
        }
}
```

```
        maxword=max(maxword,word);
        cout<<maxword;
        return 0;
}
```